

NANOSTRUCTURED BATTERY HAVING END OF LIFE CELLS

A cell-array battery is disclosed having end-of-life cells that can be activated at the end of a battery's life to, illustratively, neutralize the toxic chemicals inside the battery. In one embodiment, neutralization of the electrolyte in the battery is achieved through immobilization of the electrolyte at the end of the life of the battery by, for example, a vitrification process. Using electrowetting techniques, the electrolyte is made to contact a neutralizing substance between the nanostructures in one or more end-of-life cells, thus causing a reaction that results in the electrolyte becoming immobilized by, for example, a polymer substance. In a second illustrative embodiment, when the electrolyte contacts the substance between the nanostructures in one or more end-of-life cells, the chemical composition of the electrolyte is changed into a less toxic chemical compound, thus neutralizing the electrolyte.